

We claim:

- 1 1. A method for transmitting signaling information over control channels of a
2 communication system, the method comprising the steps of:
3 providing a defined set of signaling information to be transmitted over a first
4 signaling channel; and
5 scrambling signaling information to be transmitted over a second signaling
6 channel based on the particular signaling information, from the defined set, to be
7 transmitted over the first signaling channel.
- 1 2. The method of claim 1 where the signaling information transmitted over the first
2 signaling channel and received over such channel can be corrected without application of
3 additional channel coding to such information.
- 1 3. The method of claim 1 where the step of providing a defined set of information
2 further comprises associating a particular scrambling procedure of a particular scrambling
3 scheme to each signaling information from the defined set.
- 1 4. The method of claim 3 where the scrambling scheme is to interleave the signaling
2 information to be transmitted over the second signaling channel and the scrambling
3 procedure comprises the steps of:
4 organizing the second signaling channel information into separate rows of a
5 matrix; and
6 outputting columns of the matrix in a sequential manner where the first signaling
7 channel information to be transmitted determines which column of the matrix is outputted
8 first.

1 5. The method of claim 3 where the scrambling scheme is to apply a particular Walsh
2 code to the signaling information to be transmitted over the second signaling channel and
3 where the applied Walsh code is part of a set of orthogonal Walsh codes having different
4 spreading factors and the scrambling procedure comprises the step of selecting a
5 particular Walsh code having an appropriate spreading factor.

1 6. The method of claim 3 where the scrambling scheme is to generate a polarized block
2 pattern associated with the information to be transmitted over the second signaling
3 channel where the scrambling procedure comprises the steps of:
4 generating a specific number of replicated channel coded blocks; and
5 polarizing a specific portion of the replicated channel coded blocks.

1 7. The method of claim 3 where the communication system is a cdma2000-1x-EV-DV
2 standard compliant CDMA system.

1 8. The method of claim 7 where the first signaling channel is a primary control channel
2 the CDMA communication system and the second signaling channel is a secondary
3 control channel of the CDMA communication system.

1 9. The method of claim 8 where the defined set of information to be transmitted over the
2 primary control channel contains sub-packet length indications for the secondary control
3 channels and the data channels of the CDMA system.